

In air traffic management systems, airspace is partitioned into regions in part to distribute the tasks associated with managing air traffic among different systems and people. These regions, as well as the systems and people allocated to each, are changed dynamically so that air traffic can be safely and efficiently managed. It is expected that new air traffic control systems will enable greater flexibility in how airspace is partitioned and how resources are allocated to airspace regions. In this talk, I will begin by providing an overview of some previous work and open questions in Dynamic Airspace Configuration research, which is concerned with how to partition airspace and assign resources to regions of airspace. For example, I will introduce airspace partitioning algorithms based on clustering, integer programming optimization, and computational geometry. I will conclude by discussing the development of a tablet-based tool that is intended to help air traffic controller supervisors configure airspace and controllers in current operations.